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# Terms of Reference

# Development of Detailed Designs and Technical Specifications

## Background

*<Rationale for the project, objectives, responsibilities of the EE agency in the country, requested outputs.>*

## Scope of Services

A consulting firm, hereafter referred to as the Consultant, is required to prepare the tender documents for the first year’s project investments. Under the project, the [donor] will provide financing through the [energy efficiency agency] in the [country] for about [number] central government buildings, with about one third to be completed in the first year. The [investment framework] in the [region] grant will support detailed energy audits for all of these buildings, with the first [number] buildings which are located in [city].

The Consultant will be required to convert these detailed audit reports into tender documents by developing detailed designs, drawings and technical specifications. The Consultant will also advise the [energy efficiency agency] in the [country] on capacities and potential deficiencies with local construction firms to assist in the determination of appropriate package and lot sizes, license requirements, etc.

## Key tasks are expected to include:

1. Prepare any required supplemental drawings of audited facilities, where drawings do not otherwise exist. The Consultant will make site visits and prepare project plans (drawings) for selected buildings including actual measures of windows, entrance doors, building envelope, and unheated areas – building roof and basement; description of windows, doors, external walls, and materials of which buildings are made.
2. Prepare detailed technical specifications and basic renovation designs. Following the [energy efficiency agency] in the [country] and the [donor] approval of the audit reports and agreement from the [energy efficiency agency] in the [country] and the beneficiaries on the EE measures to be included, the Consultant will prepare detailed technical specifications for works to be tendered and implemented in the selected public buildings. The technical specifications should include description of individual actions and unit’s measures (bill of quantities and costs estimates). This design will also include the investigation and quantification of presences of the amount of hazardous materials, specifically asbestos and mercury containing light-bulbs, including specifications and bill of quantities for removal, packaging, transport and disposal/interim storage of these hazardous materials, personal safety equipment and monitoring requirements and estimate of costs for the measures.

This will also include the location where the asbestos can be disposed and the interim storage location for the mercury containing light-bulbs as per [country] legislation. They shall be included in the Basic Renovation Designs that shall be prepared by the Consultant. The Basic Renovation Designs shall be certified by the Consultant according to relevant provisions in the [country law on construction] and [technical regulation on thermal energy saving and thermal protection] in buildings. The draft Basic Renovation Design must be submitted to the beneficiary for formal consent, and to any required third parties for review and certification. Any comments provided by the beneficiary, third party auditor or by the [energy efficiency agency] in the [country] must be taken into account and revised, as appropriate, before the design is finalized.

1. Hold upstream consultation with prospective bidders. In order to determine appropriate lot sizes and bid packages (i.e., number of buildings per lot or package), the Consultant will, together with the [energy efficiency agency] in the [country], hold at least one upstream consultation with construction firms to gauge their capacity for building renovations – licenses, number of buildings one firm could renovate in a month, technical capabilities to meet technical specifications of subprojects, etc. This may also require select phone interviews with a broad cross-section of construction firms. A short, 5-10 page, note will be prepared summarizing the findings and recommendations on bidding.
2. Prepare draft bidding documents for work for 1st [number] EE audits. Based on the [donor] template for standard bidding document, the Consultant shall prepare bidding documents for renovation works on the selected buildings that shall include minimum technical qualifications, required legal documents and certificates of materials and equipment.
3. Supervise a construction project, prepares the site reports and send a copy of material acceptance to professional consultants. Oversee all phases of project and contract and sign payment parts as specified on contract. Administer contracts; evaluate schedules; monitor progress of the contractors on projects; ensure that project deadlines are met. This will include the carrying out of environmental supervision regarding proper removal, packaging, transport and disposal/interim storage of the hazardous materials and use of personal safety equipment and monitoring in line with requirements of design and [environmental mitigation and monitoring measures] for each renovation based on the [environmental management framework]. Evaluate on the completion and commissioning of the project, confirming its compliance with the investment plan.
4. Assist the [evaluation committee] of the [energy efficiency agency] in the [country] with technical advice on contractor selection. Following the bidding process and submission of proposals, the Consultant, shall assist the [evaluation committee] with technical evaluation of submitted proposals for renovation works of the [number] buildings or respond to any question raised by the Committee in terms of bidder compliance with the requirements, feasibility of any alternative technical solutions, etc.
5. Assisting the evaluation committee in answering the question raised by bidders, site visits also in the debriefing meeting.
6. All Documents need to be in [language].

In order to comply with local legal requirements, the firm should hold relevant licenses for preparation of design of works in public buildings and to carry out construction supervision, applicable with the [country] laws.

## Experience and Qualifications of the Consultant

The Consultant should be a consulting firm with relevant project experience. The work should be undertaken by a consulting team consisting of experts who have following skills and credentials:

### Key Staff

1. Team leader / Civil Engineer with at least Master degree in Civil Engineering or related field with 10 year experience;
2. Mechanical Engineer with at least 5 years professional experience, preferable in energy efficiency and renewable energy; with at least Bachelor degree;
3. Electrical Engineer with at least 5 years professional experience, preferable in energy efficiency and renewable energy; with at least Bachelor degree;
4. Architect with at least 3 years professional experience; with at least Bachelor degree;
5. Environmental Engineer or equivalent with at least 3 years of experience in hazardous material inventories in buildings, in particular asbestos and experience with requirements and practice for proper asbestos and mercury containing CFLs removal, handling, transport and disposal/storage including monitoring and personal safety equipment requirements.

### Consultants should have:

1. Strong knowledge of local standards and norms;
2. Prior experience on energy auditing of buildings and preparation of detailed project designs;
3. Engineer’s authorizations for design preparation in public buildings in compliance with local legal requirements;
4. Good communication, management, organization and reporting skills;
5. Excellent knowledge of [languages].
6. Excellent communication, presentation and use of basic computer (Microsoft office) skills.